

SECTION IV.—RIVERS AND FLOODS.

RIVERS AND FLOODS, NOVEMBER, 1918.

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[Dated: Weather Bureau, Washington, Dec. 20, 1918.]

The floods that were in progress at the end of October in the streams of the Atlantic and East Gulf States had subsided by November 4, except in the lower reaches of a few streams.

A rise to slightly above flood stage occurred in the Santee River at Rimini and Ferguson, S. C., on the 20th to 23d. Also the Saluda River at Chappells, S. C., was slightly above the flood stage from the 29th to 30th.

Heavy local rains north of Wichita, Kans., on the 8th caused a very rapid rise in small creeks and northern Wichita was flooded, making it necessary for some people to vacate their homes. The Arkansas River at Wichita rose only 1.4 feet.

Heavy rains in eastern Oklahoma on the 7th and 8th caused a moderate flood in the Neosho River and a near flood in the Verdigris and in the Arkansas below the mouth of the Neosho.

Moderately heavy rains in Texas from the 8th to 22d caused sharp rises in the rivers. The Trinity River was in flood from above Fort Worth to Liberty, Tex., as shown in Table V. At Dallas the river was 14.3 feet above flood stage.

The Colorado River rose rapidly at Marble Falls and Austin, Tex., reaching 2.4 feet above flood stage at the latter place on the 9th. A second rise to slightly above flood stage occurred at Austin on the 11th and 12th. By the morning of the 15th the stream was below flood stage.

Heavy rains on the 7th and 8th caused the Brazos River to rise very rapidly. At Kopperl it rose 14 feet in 2 hours on the 8th. The crest was at 36.5 feet, which is the highest stage of record at that place. "The flood appeared like a huge wave, disappearing as suddenly as it came and flattening out as it rushed along. A crevasse 100 feet wide was made in the levee below Waco and the business streets were flooded to a depth of 2 feet. Had the levee broken above town, a very serious loss would have resulted."

Estimated losses, November, 1918, due to floods.

Districts.	Bridges, high-ways, etc.	Crops.		Farm property, live stock, etc.	Suspension of business.	Estimated value of warnings.
		Not yet housed.	Prospective.			
Montgomery, Ala.	\$4,000	\$166,350		\$2,000	\$500	\$7,500
Fort Smith, Ark.		10,000	\$15,000		500	2,500
Dallas, Tex.	25,000	15,000		7,000	12,000	(1)
Houston, Tex.	41,750					(7)
Total	70,750	222,850	15,000	9,000	13,000	

TABLE I.—Flood stages in the North and South Atlantic drainage during November, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
White River Junction, Vt.	Feet. 13	(1)	3	Feet. 14.7	1
Santee:					
Rimini, S. C.	12	(1)	10	19.0	4
Do.		20	22	12.5	21
Ferguson, S. C.	12	(1)	12	14.9	5
Do.		23	23	12.0	23
Catawba:					
Catawba, S. C.	11	(1)	1	14.2	*31
Wateree:					
Camden, S. C.	24	(1)	2	30.5	*28
Congaree:					
Columbia, S. C.	15			13.1	1
Broad:					
Blairs, S. C.	15	(1)	1	16.7	*31
Saluda:					
Pelzer, S. C.	7	(1)	1	8.8	*31
Chappells, S. C.	14	1	2	15.1	2
Do.		29	(*)	15.4	30

* Continued from October. * October. * Continued into December.

TABLE II.—Flood stages in the East Gulf drainage during November, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
Alabama:					
Montgomery, Ala.	Feet. 35			Feet. 34.8	1
Selma, Ala.	35	2	4	38.0	3
Coosa:					
Gadsden, Ala.	22			21.5	1
Cuhaba:					
Centerville, Ala.	25	(1)	1	32.7	*30
Do.				23.9	28
Tombigbee:					
Demopolis, Ala.	39	(1)	7	47.3	4
Black Warrior:					
Tuscaloosa, Ala.	46	(1)	2	51.3	*31
West Pearl:					
Pearl River, La.	13	6	10	13.7	8-9

* Continued from October. * October.

TABLE III.—Flood stages in the Mississippi drainage (Ohio basin) during November, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
Tennessee:					
Knoxville, Tenn.	Feet. 12	(1)	1	Feet. 18.7	*31
Riverton, Ala.	32			30.0	5
French Broad:					
Penrose, N. C.	13	(1)	1	19.5	*30
Asheville, N. C.	4	(1)	2	8.0	*30
Big Pigeon:					
Newport, Tenn.	6	(1)	1	8.3	*30
Clinch:					
Clinton, Tenn.	25			24.0	1

* Continued from October. * October.

TABLE IV.—Floods in the Mississippi River drainage during November, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
<i>Arkansas River:</i>	<i>Feet.</i>			<i>Feet.</i>	
Fort Smith, Ark.....	22			20.7	10
<i>Verdigria:</i>					
North Muskogee, Okla.....	21			17.1	9
<i>Neosho:</i>					
Wyandotte, Okla.....	23			20.0	8
Fort Gibson, Okla.....	22	9	10	26.0	10

TABLE V.—Floods in the rivers of Texas during November, 1918.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
<i>Trinity:</i>	<i>Feet.</i>			<i>Feet.</i>	
Fort Worth, Tex.....	20	8	9	28.0	8
Dallas, Tex.....	25	8	14	39.2	9
Trinidad, Tex.....	28	11	23	37.6	17
Long Lake, Tex.....	40	30	24	42.3	22
Riverside, Tex.....	40			28.1	28-29
Liberty, Tex.....	25	29	(1)	25.4	30
<i>Colorado:</i>					
Austin, Tex.....	18	9	9	20.4	9
Do.....		12	12	18.4	12
Columbus, Tex.....	28	11	15	33.9	14
<i>Brazos:</i>					
Kopperl, Tex.....	21	8	8	36.5	8
Waco, Tex.....	27	8	9	37.1	9
Valley Junction, Tex.....	44			34.8	9
Washington, Tex.....	45			41.9	11

¹ Continued into December.

SNOWFALL IN MOUNTAINS, NOVEMBER, 1918.

There was considerable snow in the Sierra Nevada of California above the 5,000-foot level, but on account of much sunshine and the prevalence of desiccating winds, much of the snow on these mountains disappeared by the end of the month.

On the high mountains of Colorado, on both sides of the Continental Divide, there was a rather large amount of snow for November. The snow was especially heavy in southern counties in the watershed of the Rio Grande, and also in the central region upon the headwaters of the Arkansas. It was also heavy in western counties on the headwaters of the southern tributaries of the Grand River and the upper tributaries of the San Juan River. By the close of the month there was considerable snow cover, 10 inches or more, on the higher levels of the above-named districts. As a general rule heavy snow this early in the season is of small importance so far as available water at the end of the snow season is concerned.

MEAN LAKE LEVELS DURING NOVEMBER, 1918.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Dec. 4, 1918.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes.*			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during November, 1918:				
Above mean sea level at New York.....	<i>Feet.</i> 602.54	<i>Feet.</i> 581.14	<i>Feet.</i> 572.24	<i>Feet.</i> 246.00
Above or below—				
Mean stage of October, 1918.....	+0.05	—0.04	—0.05	0.00
Mean stage of November, 1917.....	+0.10	—0.04	—0.74	—0.69
Average stage for November, last 10 years.....	+0.07	—0.04	+0.47	+0.44
Highest recorded November stage.....	—0.97	—1.78	—1.43	—1.82
Lowest recorded November stage.....	+1.04	+1.96	+1.54	+2.59
Average relation of the November level to—				
October level.....	—0.2	—0.2	—0.3	—0.3
December level.....	+0.2	+0.2	+0.2	+0.2

*Lake St. Clair's level: In November, 575.33 feet.